City of Lafayette Staff Report

For:	City Council
By:	John M Luttropp, Associate Engineer
Date Written:	January 18, 2008
Meeting Date:	January 28, 2008
Subject:	Presentation of Conceptual Plans for Mount Diablo Boulevard Pathway from the Lafayette Reservoir to Village Center

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Introduction

The East Bay Municipal Utility District (EBMUD) has agreed to design and fund the construction of a new multi-purpose pathway on the south side of Mount Diablo Boulevard from Village Center to the Reservoir entrance in conjunction with their project to upgrade infrastructure in the vicinity of the Lafayette treatment plant.

Staff has developed conceptual drawings for this project, which the Bicycle and Pedestrian Advisory Committee and the Ad-Hoc CIP Review Committee have reviewed and provided comments. The BPAC supported a five-foot bike lane and incorporating a soft shoulder behind the ten-foot path for runners. The Ad-Hoc CIP Review Committee also supported a five-foot bike lane and suggested that a portion of the asphalt berm in the narrow section of the pathway be eliminated to allow for a wider pathway. Both committee's comments were incorporated into the conceptual drawings, attached, that were presented to the Circulation Commission. At the Circulation Commission meeting, the Commissioners decided, on a 4 to 3 vote, to recommend that the bike lane on Mount Diablo Boulevard within the project limits be increased from five feet to six feet, with the additional foot being taken from the multi-purpose pathway, reducing it from ten feet to nine feet wide (6.5 feet to 5.5 feet at its narrowest section).

Once a final configuration has been determined for the multi-purpose path, the conceptual drawings will be forwarded to EBMUD to develop the final construction plans. Once these plans have been completed and approved by the City, EBMUD will provide the funding for the City to proceed with construction in the summer of 2009. Staff seeks the Council's decision on the cross-sectional design of the pathway.

Discussion OF Pathway Cross-Section

The subject section of Mount Diablo Boulevard consists of two vehicle travel lanes and a bicycle lane on both sides of a center median. The north side of the roadway has no designated pedestrian facilities and the south side has a widened shoulder for pedestrians "behind" and adjacent to the bike lane. The current roadway cross section along the south side of Mount Diablo Boulevard from the entrance to the reservoir to Village Center consists of a 10 ½ foot and 11 foot vehicle lane, 6 foot bike lane, 7 foot pedestrian shoulder. The existing south side bicycle and pedestrian facilities are heavily used and accommodate two-way traffic consisting of walkers, joggers, and families with young children and strollers. Experienced bicyclists tend to ride in the existing bicycle lane in the

street and less experienced bicyclists ride within the pedestrian shoulder area. Pedestrians comprise the vast majority of non-motorized users along this section of the roadway.

The proposed design preserves the existing vehicle lane widths, reduces the existing bike lane in the street by one foot to 5 feet wide and develops the remaining space into a ten-foot-wide , two-way, grade separated multi purpose facility (see attached plan sheet 2). The proposed design cross-section applies throughout the length of the project except for a 150 foot section near the creek crossing at station 12+50. At this pinch point the path narrows to 6 ½ feet wide to conform to an existing bridge and avoid large oak tree. Current design guidelines for a two-way, multi purpose path call for a minimum 10 foot width (12 foot desired). According to Caltrans' design standards the minimum accepted width for a bike lane in the street is five feet.

The proposed plans were presented to the Circulation Commission on December 3, 2007. During the meeting the Commission, on a 4 to 3 vote, suggested that the bicycle lane in the street remain at the current six foot width to allow for a greater margin of safety for those bicyclists using the bike lane. This recommendation would reduce the proposed multi purpose pathway to 9 feet in width (5 ½ feet at the narrow section). The Commissioners in favor of the change felt that a nine foot wide pedestrian facility was sufficient and that the narrowing to 5 ½ feet did not represent a major problem as it is for a short distance.

In the proposed plan the more experienced bicyclists riding in large packs would continue to have a standard 5 foot wide bike lane as well as the adjacent vehicle lane available for their use. This would be consistent with the bike lane configuration found to the east of the project limits. The less experienced riders as well as pedestrians would use the multi purpose pathway. Reducing the width of the multi purpose pathway to 9 feet (5 ½ feet at the narrowest point) would make it more difficult for the inexperienced cyclists, roller bladers, and mothers with strollers and other users to navigate each other walking two or more abreast or in opposing directions. Considering the large number and various types of pedestrian uses combined with less experienced bicyclists on the current facility, staff believes maintaining a ten-foot design width for the path wherever possible is the most desirable option that best suits the needs of the greatest number of potential users of the facility. The ten-foot width is also consistent with the width of other multi-purpose pathways constructed elsewhere in the City, including the planned trail in the EBMUD aqueduct right-of-way behind the Veterans' Building as part of the Woodbury project.

Discussion of Split Rail Fence Concept

In the initial project scoping staff had a split rail fence to be included, similar to the design of the recently completed work on Moraga Road. This would have made the on-street bike lane 4 feet wide, with a 9 foot wide multi-purpose pathway. Staff felt that this design would provide a visual barrier between the vehicle lanes and the pedestrian facility and would also serve to break up the wide cross-section of the road.

On October 18th, 2007, staff presented this design to the Bicycle and Pedestrian Advisory Committee (BPAC) for review and comments. BPAC recommended that the split rail fence be deleted from the project and that the additional foot be given to the bike lane to create a 5 foot bike lane. BPAC felt that the split rail fence would "trap" bicyclists between the vehicle lanes and the fence, creating an unsafe condition. In addition they felt that a fence along this part of Mount Diablo Boulevard would not be in keeping with the aesthetics of the area.

On November 6th, 2007, staff presented the same design and the BPAC comments to a joint meeting of the Ad-Hoc CIP Review Committee (consisting of the respective chars of the Planning and Design

Review Commissions) and the City Council Public Works Subcommittee. During this meeting it was agreed that the fence should be eliminated and the bike lane increased to 5 feet in width.

On December 3rd, 2007, staff presented the revised design with no fence and a 5-foot bike lane to the Circulation Commission. During this meeting staff explained that the fence was deleted from the project at the recommendation of BPAC, the Ad-Hoc CIP Review Committee and the City Council Public Works Subcommittee due to safety and aesthetic concerns. The Circulation Commission had no other specific comments on the issue.

Key Details of Current Design Proposal

1. Currently Mount Diablo Boulevard is striped with a 10 ½' and an 11' vehicle lane. No changes in these lane widths are proposed.
2. The on street bike lane is to be 5 feet wide as it currently is to the east of the project.
3. The two-way, multi-purpose path is typically 10 feet wide with a narrow section 6.5 feet wide by the creek crossing and large oak tree at station 12+30.
4. When possible a 2 foot wide unpaved shoulder for runner will be incorporated into the shoulder backing for the pathway.
5. The multi-purpose path will be constructed of asphalt concrete and raised except at the narrow creek crossing. In this location the pathway will be at grade.
6. The at grade portion of the multi-purpose path will have a 6-inch high asphalt curb separating the path from the bike lane in the street. The curb will be omitted as the pathway passes the large oak tree at station 12+30. This will increase the width of the narrow point from 5.5 feet to 6.5 feet.
7. Aside from the standard curb, there is no other vertical barrier between the street and the pedestrian path.
8. Two trees are planned for removal. One large Eucalyptus due to its proximity to the pathway and the alignment of the new EBMUD pipe crossing, and a 12" diameter redwood that encroaches approximately 2 feet into the planned pathway area.

Recommendation

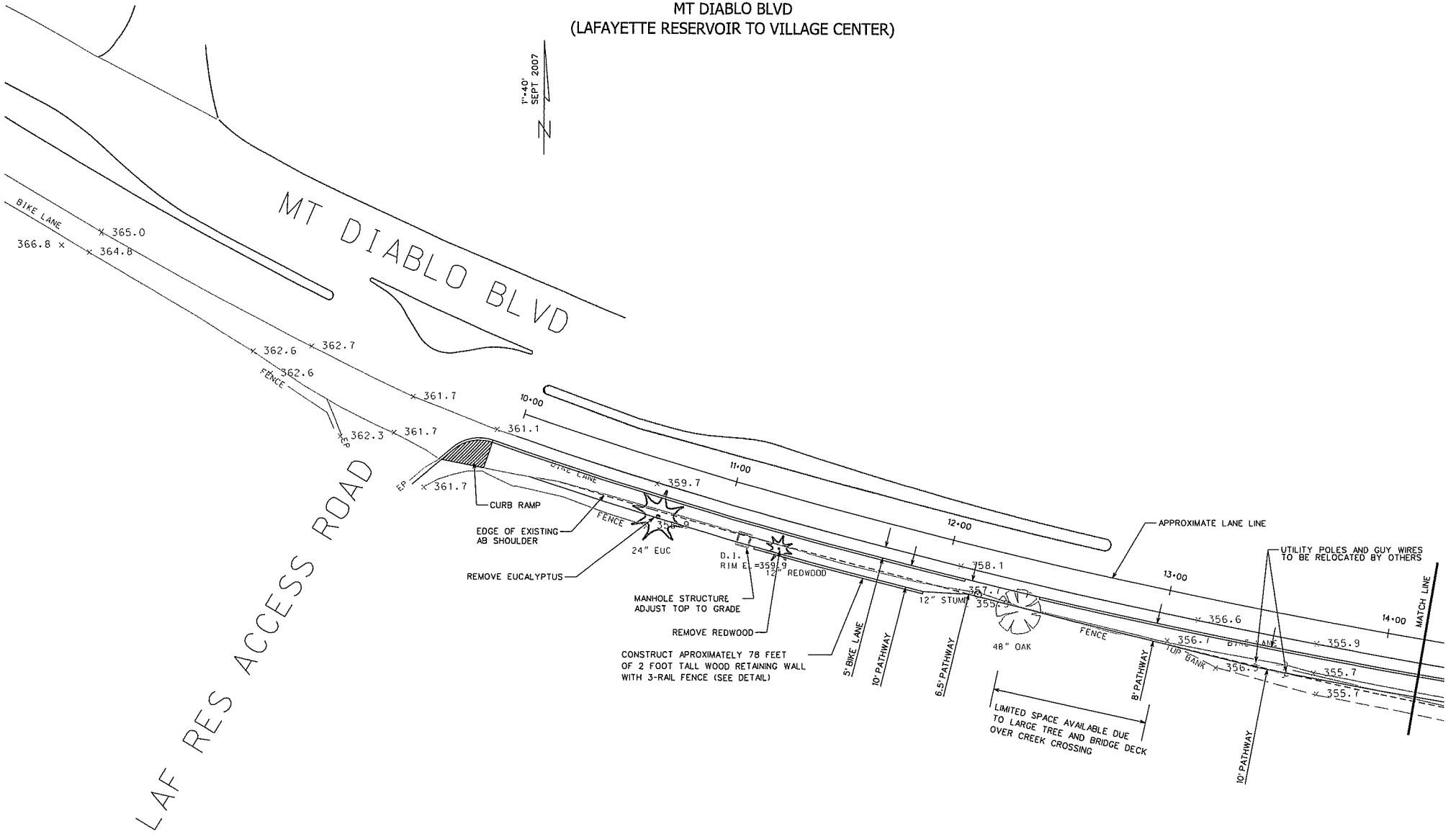
Staff recommends that the current pathway concept, with a five-foot on street bike lane, be forwarded to EBMUD for the preparation of final plans for construction.

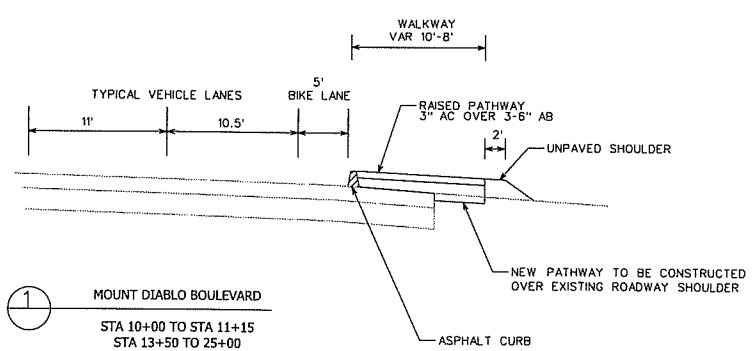
Attachments

1. Conceptual drawings

PATHWAY CONCEPT

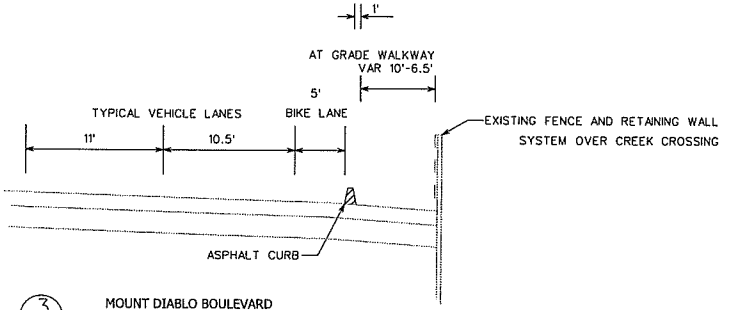
MT DIABLO BLVD
(LAFAYETTE RESERVOIR TO VILLAGE CENTER)





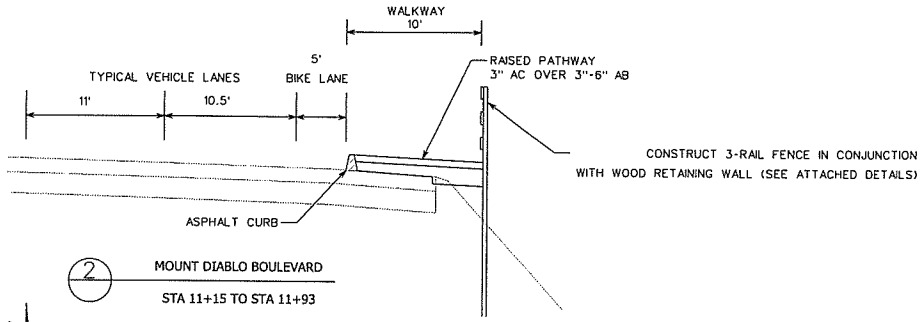
1 MOUNT DIABLO BOULEVARD

STA 10+00 TO STA 11+15
STA 13+50 TO 25+00



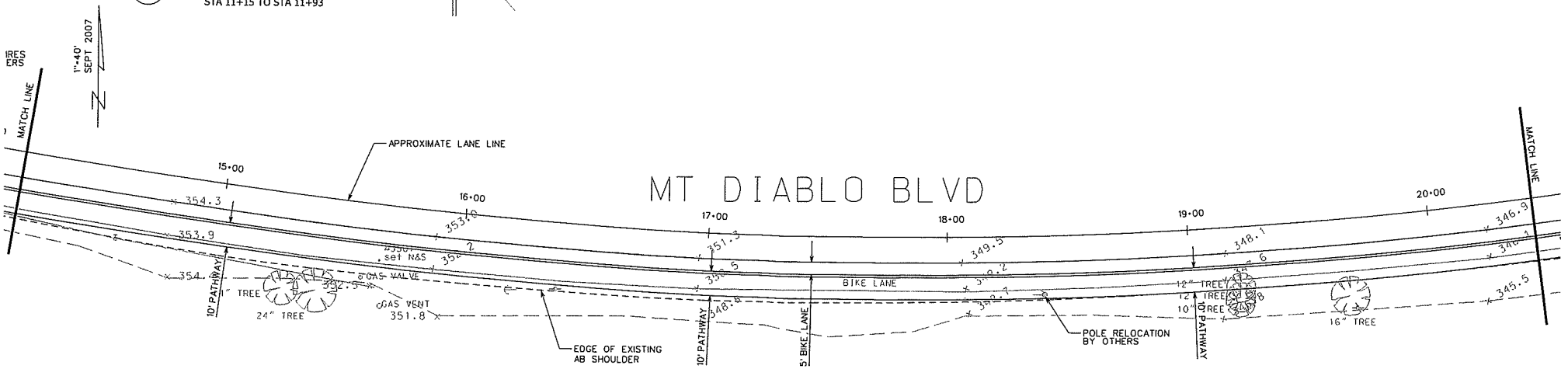
3 MOUNT DIABLO BOULEVARD

STA 11+93 TO STA 13+50

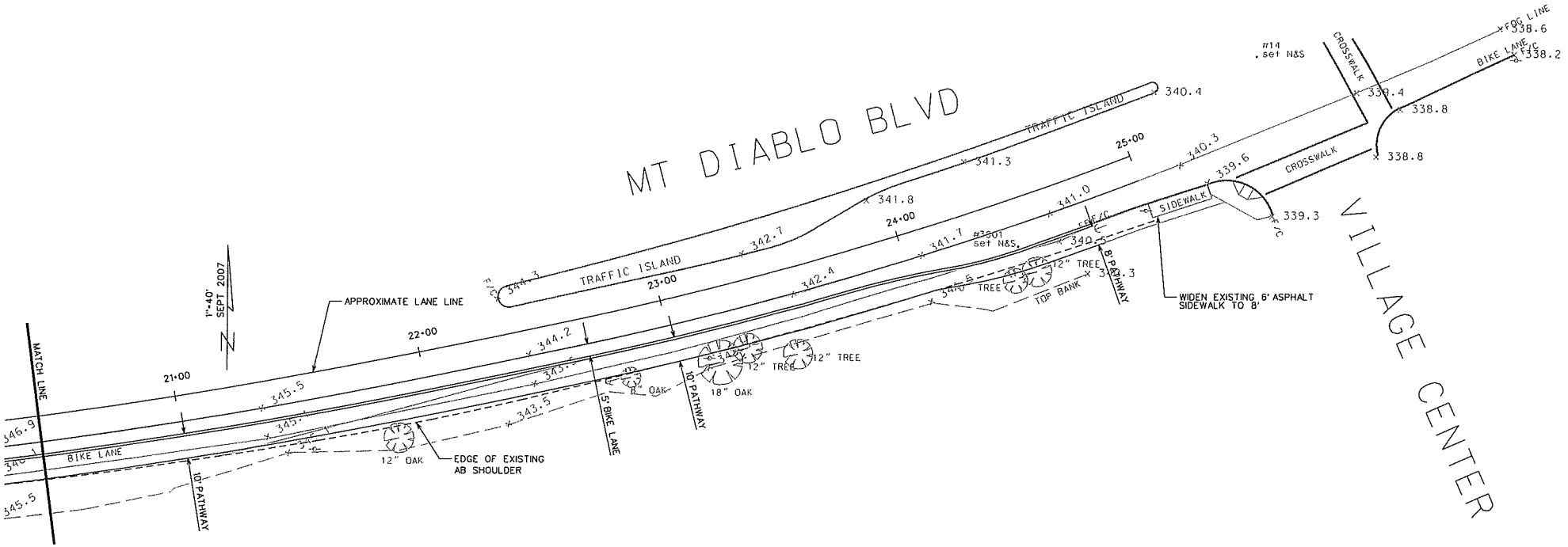


2 MOUNT DIABLO BOULEVARD

STA 11+15 TO STA 11+93



ALL
SING


MT DIABLO BLVD
VILLAGE CENTER
1"=40'
SEPT 2007
MATCH LINE
APPROXIMATE LANE LINE
21.00
22.00
23.00
24.00
25.00
TRAFFIC ISLAND
TRAFFIC ISLAND
BIKE LANE
10' PATHWAY
12" OAK
EDGE OF EXISTING
AB SHOULDER
5' BIKE LANE
10' PATHWAY
18" OAK
12" TREE
12" TREE
TREE
TOP BANK
8' PATHWAY
SIDEWALK
WIDEN EXISTING 6' ASPHALT
SIDEWALK TO 8'
CROSSWALK
CROSSWALK
BIKE LANE
EDGE OF PAVEMENT
#14
Set N&S
#3901
Set N&S,
346.9
345.5
344.3
342.7
341.8
341.3
340.4
344.2
343.5
342.4
341.7
341.0
340.3
339.6
339.3
338.8
338.8
338.6
338.2